



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The Function of Salvage in the Education of Industrial Workers

By GEORGE W. SHERMAN

President, Akron Industrial Salvage Co. Formerly, Manager of Salvage Department of The B. F. Goodrich Rubber Co.

POSSIBILITIES OF WASTE RECLAMATION

MODERN industrial salvage methods have been developed by a pressing need to dispose of large volumes of material in the best and most economical method. The education of the industrial worker was no factor in the inception of the plans and I may say, without fear of contradiction, that it was no factor in their development and is today no deliberate factor in most of the plants that have developed this subject. The problem of finding uses for a constantly changing group of materials flowing overwhelmingly down upon a Salvage Department, generally crowded as to space and hampered by lack of equipment and labor, is as fascinating and engrossing as it is overwhelming, and the fact that these activities have served a purpose in the education of workers has been purely incidental and fortunate rather than deliberate. The later phases of this development whereby great values are produced from most unpromising sources is strictly a cold-blooded business proposition, but it has nevertheless fostered the educational feature which has been of more value than any other incidental result.

There is no line of activity calling for more keen or brilliant imagination of a practical type than the making of something from nothing; the multiplying of values by sorting, grading, cleaning, or by ingenious mechanical or chemical contrivances and simple man-

ufacturing operations. The men and women who live their industrial lives close to these problems sense this fact and develop remarkable ability and skill in conceiving and carrying out manipulations, in planning new uses for materials, or in reducing costs or improving quality. The incentive for this type of service consists in the opportunity to apply it. In most staple manufacturing it is very difficult to get changes made, because of the large investment in equipment and because of the inertia of an established process. In salvage work nothing is fixed or permanent and one is always privileged to test out in a crude way any dream he may have for the improvement of anything.

POPULAR ATTITUDE TOWARD WASTE

But I am forgetting that many of my readers do not know of modern industrial salvage methods, and that the sole point of view of most of them may be outlined as follows:

Get rid of it!
Throw it away!
Send it to the dump!
Burn it up!
Chuck it in the garbage or ash can!

OR

Sell it to the "junkie man," if he'll buy!
Phone the Salvation Army to send for it, if they want it!
Take it to the United Charities, if it fits their needs!
Give it to the first Rummage Sale that asks for it!
Pass it on to your own pet charity!
Have a sale at your home!

Pay a teamster to clean up and haul it away!
Or, dispose of it in any one of a hundred other
ways that will immediately occur to you!

Then you rest content that a nuisance has been eliminated, that your house, or office, or store, or factory, or school is spick and span and that the way is clear for real business to proceed in the home, the office, the store, the factory or the school. Let me change the pronoun from *you* to *we*. For I, myself, do all these things at times, even though it is my business to do somewhat differently and even though I know that the waste problem can be better solved than it is. Again, let us change the pronoun from *you* to *we* because I am seeking your aid and coöperation in finding and applying the program which will advance this problem toward a better solution.

WASTE RECLAMATION AN ESSENTIAL ACTIVITY

There seems to be a difference of opinion as to the Biblical text that promises the eternal presence of "the poor," but no one will disagree with the maxim that waste is an essential of all physical activities. I use the term "waste" here in the broad sense, covering unavoidable trimmings, scraps, garbage, ashes, paper, junk, etc., as well as similar items produced by carelessness. This acknowledgment establishes an essential feature for the consideration of the subject as an important, essential activity, because it is permanent to the extent of always being present. Not only is this problem always present, and always will be present, but with all humility each new student in this line must admit it always has been present.

And in spite of the fact that each new student, each new recruit, each organization conducting a campaign, feels

sure that their little effort to use the junk pile is a pioneer discovery, if not of the pile itself, at least of a general panacea for the solution of the waste problem, it is obvious that we are dealing with a problem as old as the universe, and although history has not devoted a great deal of space to the subject as a separate entity, reference to it is frequent, showing that much study has been expended through the ages in solving the problems of waste. Lazarus lived on the crumbs that fell from the rich man's table; Ruth gleaned the wheat left in the field by the harvesters; Dickens tells of the fortune made by the dustman in *Our Mutual Friend*; the close economies of the people of France, which have become traditional, involve countless solutions of the problems of waste; many of the fortunes of our own country were built on the business of the itinerant tin peddler who bartered his wares for old rags, metal, bottles, etc., and at the same time bartered the news of the countryside for other wares of the same class; the humble, diligent, often despised "junka-man" of the backyards and alleys of the city solves many of the specific phases of our problem; and the magnates of the waste trade, their business often growing from these same humble sources, have devoted their lives to the furthering of the same investigation. And who can tell the countless garments made over by the mothers of the world for another use or for the next smaller member of the family. And so it must be with due humility that we presume to do better or to do more or even to do differently in this line than the accumulated wisdom of all time has done.

EDUCATIONAL ASPECTS

We must know then: (1) What has

been done? (2) In what ways does past accomplishment fall short? (3) What can we suggest to overcome or to lessen these shortcomings?

What has been done? Specific problems have been solved, and often well solved, by the millions.

Specialists have concentrated keen minds, wide experience, limitless funds and comprehensive business organizations on the problem of making money on special items or groups of items, and incidentally have advanced the state of the art as always happens under such circumstances.

Municipalities, state and national governments have investigated, reported and in many cases acted on the reports of certain phases of waste. Government activities, however, except possibly in war emergency, have approached the problem mostly from a mere housecleaning standpoint.

Manufacturers have faced and solved countless problems of valueless tonnage and have produced a vast increase in value.

In what ways does past accomplishment fall short? (1) In the solving of specific problems only without a recognition that general basic principles apply to the whole subject and form a legitimate field for a general specialist.

(2) In the failure to solve, as a part of the general problem, the features which apparently do not pay and leaving the them as a housecleaning nuisance.

(3) In the failure of the present business specialist to recognize that his business lacks permanence due to his narrow field. His very success in increasing the number of uses for an item or in improving its value, gradually cut down the margin as this knowledge becomes more and more general.

If, therefore, he confines himself to

too narrow a group, he will inevitably work himself out of his business. Also, in the constantly changing methods of manufacture, the identity, shape, color, chemical or physical characteristics of the waste changes frequently. The business built up on one item or type of waste may last for only a comparatively short time and then disappear with the disappearance of that item of waste.

(4) In the wrong psychological attitude toward the whole subject. Waste is a discard from some physical activity and we are all looking backward from the standpoint of that activity insofar as we consider the subject at all.

We use too readily the terms waste, trash, scrap, swill, garbage, junk and similar terms of contempt.

What can we suggest to overcome or to lessen these shortcomings? We¹ can combine large groups of waste producers, either coöperatively, or as contributors or customers of a general organization, to handle all types of waste produced or used by the group. Thus we can gain sufficient tonnage of all important items to allow of proper grading, marketing and shipping, even though none of the contributors may have enough by himself to warrant him in even saving those items.

We gain, on account of the volume of the combined business, an organization, plant and equipment for economical handling, wise storage and manipulation, proper grading and in some cases manufacturing, as well as experimental research and development work which would not be warranted in the case of most of the contributors.

¹ A successful experiment along this line is now thriving in Akron, Ohio, in the work of the Akron Industrial Salvage Company, of which Mr. Sherman is president.

We gain a stability not available to the narrow specialist, due to the fact that the handicaps of some line, from time to time, are counterbalanced by the unusual advantages of some other lines.

We conserve values that are now being lost because there is no proper and comprehensive mechanism available for them all.

We gain such a multitude of problems that we can always grow, even though our solutions of former problems do react and cut down the margin of profit as the improvement becomes general knowledge.

We can eliminate the housecleaning feature for our government because we have taken all wastes and have, therefore, left nothing behind.

It is well to note here that no organization can properly solve all these problems, but the plan outlined can handle everything in some way and reduce to a minimum the items and quantities which have to be thrown away or destroyed because no solution has been found.

We can, and this is the large basic feature on which the whole program rests, produce a different psychological attitude on the part of all of us toward this subject by encouraging and popularizing the use of the words salvage, reclamation, conservation and other aristocrats of the scrap dictionary which imply the saving or conversion of lost material into legitimate merchandise.

We can take the subject seriously and realize that: "Nothing useless is or low." But, principally we must learn to think always of the next man along the line, to put ourselves in his place and to look at our wastes not backward as a discard to be gotten rid of and forgotten, but for-

ward from the standpoint of the consumer to whom they are raw materials.

When this point is gained it will be immediately realized that these raw materials are of greater value, if properly graded as to condition, size, quality, etc., and particularly as to freedom from dirt or other foreign material or from damage by moisture, grease, oil, unnecessary cutting, etc., than if mishandled in any of these or other ways. This point of view must be universal and its application must become habitual to get the best and maximum results.

The people actually producing the waste, whether metal chips, or cloth trimmings, or scrap paper, or garbage from home or restaurant, or rubber trimmings, or oil from machinery, or empty barrels, or tin foil from about a package, or foundry dross, or tin cans, or bottles, or feathers, or any other of the countless items which reach the waste channels of the country, must have this point of view and the habit of so handling these items as to preserve the greatest value possible for the industry waiting for them as raw materials.

The foremen and the management of factories where these people produce the waste materials must have this point of view and habit of thought so that they will supply to their work people the necessary facilities to make it convenient to preserve waste values. And in general everybody must do likewise. Thus we have developed, either as salvage departments in large factories, or as coöperative companies, a business program for getting maximum values out of waste.

Reference has been made to a few of the educational influences affecting the people actually handling the materials.

INSPIRATIONAL INFLUENCES

Let us see now what other influences there are and what other groups are affected by any of these influences.

There is the influence of a large volume of business forcing attention and respect and reacting to a scrutiny of the wastes controlled by the observer or his company.

There is the influence of money made by the handling of wastes properly over and above that made by the usual house-cleaning attitude. This arouses interest and enthusiasm over the prospect that the observer may share this money by handling his own waste products in the same way.

There is the influence of the objection of all normal mature minds to deliberate waste. These minds condone and even endorse wasteful methods because "familiarity breeds contempt," and because no adequate or better method of solving a pressing problem of waste disposal has been brought to their attention. But when a new or better method is available, this normal objection to waste awakens from its sleep and strives to equal, eliminate or surpass the program presented.

There is the influence of interest in anything new, of instinctive wonder at the simplicity of a process or machine seen for the first time, and of a wish to try it out or to improve upon it and in general to utilize the inventive faculty more or less dormant in the average mind.

There is the influence of order and cleanliness which is an important feature of the programs described above and whose impression is deeper because of the unusual diffi-

culty of keeping materials of this nature clean and orderly.

There is a tendency to coöperation between the management and the organization handling these materials because no part of the group can get very far away from physical handling without losing touch with the life of the business. This is so, because of the continually changing type, condition and variety of the items. Thus the organization is and must be interested in all of its problems. The company's officers, foremen, clerks and workers, are allowed in on any and all discussions of physical problems and the nucleus of the solution is just as likely to come from the most humble worker as from the superintendent, manager or president. This working together produces harmony and a spirit of team work and pride in the company or department that is invaluable.

These influences and others along the same line can all be grouped under the head of inspirational influences. They are all breeders of enthusiasm.

No system of education gets anywhere without the interest and enthusiasm of the teacher and pupil. Knowledge is most effective, permanent and valuable when acquired unconsciously, incidental to the handling of normal obviously necessary work or problems, rather than deliberately, as it seems to be necessary to acquire most book learning. The modern handling of salvage problems does not necessarily teach details or facts or rules, but it does arouse the interest, enthusiasm, imagination and inventive faculties of the entire organization concerned in the work from top to bottom.

And right here let me say that this

type of education is sometimes most sorely needed at the so-called top of the organization as well as at the bottom and in the middle. We must not overlook our obligation to the poor abused capitalist and officials while we are offering the best we have to our masters who work mostly with their hands. These same influences expand and have their inspirational effect on the departments delivering material to or getting material from a salvage department; on the companies or individuals supplying wastes to or buying products from the salvage company; and on the waste specialists, whose very success is built on keeping awake and learning wherever learning is to be had.

But, you ask, "Do these theories as to the inspirational value of the modern salvage attitude work out?" I reply without hesitation that in some cases the results are so discouraging along this line that they would seem to disprove conclusively the theories advanced. On the other hand, when men and women so develop in this work that they attract attention outside of the department and are transferred in spite of salvage department protest, it

means something more than an exceptional person accidentally located in this work. These cases have been too frequent for the good of the department.

Again, when a department acquires and maintains a reputation for united loyalty and team work, the method under discussion can doubtless be credited at least partially.

Then when the rate of turnover, unfortunately very high in these days of restlessness and turmoil, maintains an average materially lower than that of the factory as a whole, we must credit a few points at least to our program.

It is also an impressive fact that the full coöperation of other departments and companies has been developed,—and it has been developed from an initial attitude of skepticism.

But most conclusive of all is a talk with the individuals not only in this group, but also in the departments and companies coming in touch with the activities of the group. That is conclusive.

In saving waste, we have inspired the workers of hand and head.
EVERYTHING HAS A VALUE.